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Approval # 200244-I (Replaces 200035-I)

Safety & Buildings Division
201 West Washington Avenue
P.O. Box 2658
Madison, WI 53701-2658

Wisconsin
Material Approval

Material

WALK-IN COOLER AND FREEZER PANELS
Manufactured with the following brand names:
KYSOR PANEL SYSTEMS or
DELFIELD WALK-INS

Manufacturers

Kysor Panel Systems
4201 Janada Street
FortWorth, Texas 76117

Kysor Panel Systems
521 Industrial Park Road
Piney Flats, Tennessee 37686

Kysor Panel Systems
3831 South Bullard Avenue
Goodyear, Arizona 85338

Kysor Panel Systems
7320 N.E. 55th Avenue
Portland, Oregon 97218

SCOPE OF EVALUATION

GENERAL: This report evaluates the use of Kysor Panel Systems/Delfield Walk-Ins (composite wall panels with exterior skins of aluminum, steel, galvalume or, stainless steel, and a polyurethane foam core), for flame spread and smoke development, and interior finish and trim. The walk-ins (coolers, refrigerated facilities and freezer warehouses) manufactured by Kysor Panel Systems/Delfield Walk-Ins.

The **Comm** requirements below are in accordance with the current **Wisconsin Building and Heating, Ventilating and Air Conditioning Code applicable to buildings approved prior to July 1, 2002:**

- **Foam Plastic Core Material:** The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System and CIP-14-4247 (442-22) were evaluated in accordance with the foam plastic requirements of **s. Comm 51.06(2)** and **s. Comm 51.06(6)**.
- **Interior Finish:** The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System and CIP-14-4247 (442-22) were evaluated in accordance with the interior finish requirements of **s. Comm 51.07(2)(b)**.

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The **IBC** requirements below are in accordance with the **Wisconsin Amended ICC 2000 Code (effective 7/01/02):**

- **Foam Plastic Core Material:** The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System, and CIP-14-4247 (442-22) were evaluated in accordance with the foam plastic requirements of **s. IBC 2603.1**, **2603.2**, **2603.3** and **Exception 2**, **2603.4.1**, **2603.4.1.3**, and **2603.4.1.7**.
- **Interior Finish:** See **LIMITATIONS OF APPROVAL** section.

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DESCRIPTION AND USE

The Kysor Panel Systems/Delfield Walk-Ins panels may consist of minimum 2-1/2- up to a 6-inches thick polyurethane foam core. The polyurethane foam core material is BASF P11381 / P100 U Isocyanate foam system or, General Latex XR-1149 Non-CFC foam system or, CIP-14-4247 (442-22).

The interior and exterior panel finishes are a minimum 0.032 inch, 20 gage (having a base metal thickness not less than 0.016 inch, 26 gage, at any point), painted or non-painted galvanized steel or, painted or non-painted galvalume, stainless steel or, painted or non-painted aluminum.

Adjoining finished panels are attached together by means of cam-locking devices incorporated into each finished panel.

TESTS AND RESULTS

The tests and results listed below cover the pre-July 1, 2002, **Wisconsin Building Code Comm** and the current **IBC** requirements **(effective 7/01/02):**

Testing of the polyurethane foam core (2-1/2- up to and 6-inches), in accordance with ASTM E84 was conducted to determine the following surface burning characteristics:

Core Material	ASTM E84 Core Values	Finished Panel Values: 2-1/2- up to up to 6-inch thick core with painted or non-painted galvanized steel or, painted or non-painted galvalume or, stainless steel or, painted or non-painted aluminum
BASF P11381 Resin / P100 U Isocyanate Polyurethane Foam System	Flame Spread = 10 Smoke Developed = 95	Shall meet the conditions of **s. Comm 51.07(2)(b)**
General Latex XR-1149 Non-CFC Polyurethane Foam System	Flame Spread = 15 Smoke Developed = 420	Shall meet the conditions of **s. Comm 51.07(2)(b)**
CIP-14-4247 (442-22) Polyurethane Foam System	Flame Spread = 20 Smoke Developed = 350	Shall meet the conditions of **s. Comm 51.07(2)(b)**

LIMITATIONS OF APPROVAL

Building Code Applicable to Projects Submitted for Review Prior to July 1, 2002: The **Comm** limitations below are in accordance with the current **Wisconsin Building and Heating, Ventilating and Air Conditioning Code:**

- **Foam Plastic Core Material:** The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System, and CIP-14-4247 (442-22) core (as listed in the **TESTS AND RESULTS** section of this approval), do meet the requirements of **s. Comm 51.06 (2**) for foam plastics.
  The Kysor Panel Systems/Delfield Walk-Ins panels are approved for use when installed in accordance with **s. Comm 51.06 (6)**.
- **Interior Finish:** The BASF P11381/P100 U Isocyanate foam, General Latex XR-1149 Non-CFC foam and CIP-14-4247 (442-22) foam cores have exterior metal skins of 0.032 inch, 20 gage painted or non-painted galvanized steel, galvalume, aluminum or stainless steel. The base metal thickness shall not be less than 0.016 inch, 26 gage, at any point. The metal skin is an approved interior finish in accordance with the interior finish requirements of **s. Comm 51.07(2)(b)**.

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The **IBC** limitations below are in accordance with the **Wisconsin Amended IBC 2000 Code (effective 7/01/02):**

- **Foam Plastic Core Material:** The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System, and CIP-14-4247 (442-22) when installed in a maximum thickness of 10 inches in cooler and freezer walls will meet the requirements of **s. IBC 2603.4.1.2** when installed per that section.
  Freezer buildings where exterior walls are one story shall meet the requirements of **s. IBC 2603.4.1.4** when installed per that section.
  Freezer buildings where exterior walls are of any height shall meet the requirements of **s. IBC 2603.5** when installed per that section.
- **Interior Finish:** The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System and CIP-14-4247 (442-22) foam cores have exterior metal skins of 0.032 inch, 20 gage painted or non-painted galvanized steel, galvalume, aluminum or stainless steel. The base metal thickness shall not be less than 0.016 inch, 26 gage, at any point. The above products shall be installed in accordance with **ss. IBC 803.1**, **803.2**, **803.3**, **803.3.3**, and **803.4**.

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The limitations listed below cover the pre-July 1, 2002, **Wisconsin Building Code Comm (expired 6/30/02)** and the current **IBC** requirements **(effective 7/01/02):**

The Evaluation Number 200244-I must be provided when building plans proposing the use of this material are submitted for review, unless full technical information is supplied.

The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System and CIP-14-4247 (442-22), used in Kysor Panel Systems/Delfield Walk-Ins shall be installed in accordance with the manufacturer's recommendations and procedures.

The BASF P11381/P100 U Isocyanate Foam System, General Latex XR-1149 Non-CFC Foam System and CIP-14-4247 (442-22), used in Kysor Panel Systems/Delfield Walk-Ins **is <u>not</u> approved as a thermal barrier protection for other foam plastic insulation.**

Structural properties and thermal performance of panels were not evaluated.

This approval will be valid through December 31, 2007, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval number must be provided when plans that include this product are submitted for review.

<u>DISCLAIMER</u>

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Revision Date:
Approval Date: September 18, 2002 By: _____

Lee Finley, Jr.
Product/Material & Building Plan Review
Integrated Services Bureau

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